



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/541,268

04/13/2006

Jaewan Byun

126587-0026

6245

22429

7590

06/23/2008

LOWE HAUPTMAN HAM & BERNER, LLP  
1700 DIAGONAL ROAD  
SUITE 300  
ALEXANDRIA, VA 22314

EXAMINER

ZEWARI, SAYED T

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

06/23/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/541,268	<b>Applicant(s)</b> BYUN ET AL.	
	<b>Examiner</b> SAYED T. ZEWARI	<b>Art Unit</b> 2617	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 April 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Amendment*

1. Applicant's arguments filed on 4/10/2008 have been fully considered but they are not persuasive.

2. Applicant argument stating that ***"Tiedemann does not reach or suggest EV-DO system-based recovery from a failed hand-off"*** This argument is not persuasive. Tiedemann discloses a recovery system from a failed hand off and Turner discloses EV-DO system. The combination discloses the limitations of the applicant's claim.

3. Applicant argument stating that ***"Tiedemann does not teach or suggest that the EV-DO access network controller re-transmit...."*** This argument is not persuasive because just retransmitting a signal does not constitute innovation. In the process of hand off, signals are exchanged between the mobile terminal and communication system and merely retransmission of a signal is not an invention. Furthermore, applicant admits on page 4 of specification that

"When the EV-DO system carries out the hand-off with respect to the mobile communication terminal, the EV-DO system must transmit a traffic channel assignment signal to the mobile communication terminal and receive a response message signal from the mobile communication terminal in order to perform the hand-off. "

On the same page applicant discloses a solution which is basically the same concept as prior art above:

“...the EV-DO system transmits a traffic channel assignment signal to the hybrid access terminal several times for realizing the hand-off...”

4. Therefore, the above combination discloses all the limitations of the claims of the applicant.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Turner (US 2003/0,152,049) in view of Tiedemann, Jr. et al. (US 5,999,816).

With respect to claim 1, Turner discloses a multimedia mobile communication system comprising: a hybrid access terminal making communication with the EV-DO system and a IX system in order to transmit/receive voice signals or data (**See Turner's section [0010] particularly lines 1-8, [0012] particularly lines 1-5, [0015] particularly lines 4-7 where a hybrid access terminal is disclosed that communicates with two types of networks namely IS-2000 (CDMA 2000) for voice,**

**and IS-856 for high speed data packet communication, see additional info:**

**abstract lines 1-5, section [0002], [0006] particularly lines 8-13 , [0008], , [0018], [0041], [0043] lines 5-13, [0045] lines 1-3),** transmitting a route update signal to the EV-DO system while a multimedia service is being transmitted thereto from the EV-DO system **(See Turner's section [0014] lines 1-6, [0042], see additional info: [0013] lines 1-5, [0010] lines 1-8),** and performing a hand-off by transmitting a hand-off response signal to the EV-DO system when a hand-off signal is transmitted thereto from the EV-DO system **(See Turner's section [0014] lines 1-6, [0042], see additional info: [0013] lines 1-5, [0010] lines 1-8);** a IX for transmitting/receiving a voice signal or data to/from the hybrid access terminal **(See Turner's figure 2(202), section [0048], [0046]);** a IX controller for controlling a transmission service of the IX transceiver **(See Turner's figure 2(206), section [0046] lines 4-5, [0047] lines 7-8);** an inherent mobile switching center for providing a communication access route of the IX system with respect to a communication call from the hybrid access terminal by switching the communication access route **(See Turner's [0013] lines 1-5, [0010] lines 1-8, [0014] lines 1-6, [0042] lines 1-4 where the action of handoff between networks indicates presence of a Mobile Switching Center and a mobile switching center is an inherent part of a cellular communication system);** an EV--DO access network controller controlling a packet data transmission service of the EV-DO access network transceiver subsystem, receiving the route update signal from the hybrid access terminal while the multimedia service is being transmitted to the hybrid access terminal from the EV-DO access network transceiver subsystem, transmitting a traffic channel

assignment signal to the hybrid access terminal in response to the route update signal, and re-transmitting the traffic channel assignment signal to the hybrid access terminal if a response signal(L2ACK) is not transmitted thereto from the hybrid access terminal, thereby performing the hand-off **(See Turner's figure 1, section [0041]–[0043) Turner discloses a since a hybrid access terminal operates in this system then inherently the networks includes all the required subsystems)**; and a packet data serving node connected to the EV-DO access network controller so as to transmit/receive the packet data to/from the EV-DO system **(See Turner's figure 1, section [0044])**. Turner discloses everything claimed as applied above to claim 1, except for explicitly reciting a system for recovering from hand-off fail. In analogous art, Tiedemann discloses a communication system for recovery from a failed handoff **(See Tiedemann's col.3 lines 45-65, lines 4-16, lines 19-24)**. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Turner by specifically implementing the hand off fail recovery system in the EV-DO communication system as taught by Tiedemann for the purpose of reducing the probability of dropped calls during hand off.

With respect to claim 6, Turner discloses a method in a multimedia mobile communication system, the method comprising the steps of: (a) performing a packet data transmission between the EV-DO system and a hybrid access terminal in traffic with the EV-DO system **(See Turner's section [0010] particularly lines 1-8, [0012] particularly lines 1-5, [0015] particularly lines 4-7 where a hybrid access terminal is disclosed that communicates with two types of networks namely IS-2000**

(CDMA 2000) for voice, and IS-856 for high speed data packet communication, see additional info: abstract lines 1-5, section [0002], [0006] particularly lines 8-13, [0008], , [0018], [0041], [0043] lines 5-13, [0045] lines 1-3), (b) transmitting a route update signal for a hand-off from the hybrid access terminal to the EV-DO system (See Turner's section [0014] lines 1-6, [0042], see additional info: [0013] lines 1-5, [0010] lines 1-8), (c) transmitting a hand-off signal from the EV-DO system to the hybrid access terminal (See Turner's [0013] lines 1-5, [0010] lines 1-8, [0014] lines 1-6, [0042] lines 1-4); (d) determining whether or not a response signal for the hand-off signal is transmitted from the hybrid access terminal to the EV-DO system (See Turner's [0013] lines 1-5, [0010] lines 1-8, [0014] lines 1-6, [0042] lines 1-4); and (e) re-transmitting a traffic channel assignment signal from the EV-DO system to the hybrid access terminal if the response signal is not transmitted from the hybrid access terminal to the EV-DO system (See Turner's figure 1, section [0041]–[0043]); Turner discloses everything claimed as applied above to claim 1, except for explicitly reciting a system for recovering from hand-off fail. In analogous art, Tiedemann discloses a communication system for recovery from a failed handoff (See Tiedemann's col.3 lines 45-65, lines 4-16, lines 19-24). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Turner by specifically implementing the hand off fail recovery system in the EV-DO communication system as taught by Tiedemann for the purpose of reducing the probability of dropped calls during hand off.

With respect to claim 2, Turner discloses a method wherein the hand-off signal transmitted to the hybrid access terminal from the EV-DO system includes a traffic channel assignment signal having a sequence number of a neighbor base station and an acknowledge signal for a reverse traffic channel **(See Turner's [0013] lines 1-5, [0010] lines 1-8, [0014] lines 1-6, [0042] lines 1-4 where signaling between the neighboring stations is an inherent part of the process of handoff).**

With respect to claim 3, Turner discloses a system wherein, if the response signal (L2ACK) is not transmitted to the EV-DO system from the hybrid access terminal in traffic with the EV-DO system even though the EV-DO system has transmitted the traffic channel assignment signal to the hybrid access terminal, the EV-DO system again transmits the traffic assignment signal to the hybrid access terminal, and if the EV-DO system receives the response signal (L2ACK) from the hybrid access terminal in response to the traffic channel assignment signal, the EV-DO system transmits an acknowledge signal for a reverse traffic channel to the hybrid access terminal, and then, re-transmitting the traffic channel assignment signal to the hybrid access terminal if a traffic channel completion signal is not transmitted to the EV-DO system from the hybrid access terminal, thereby performing the hand-off **(See Turner's section [0108]-[0118]).**

With respect to claim 4, Turner discloses a system wherein the hybrid access terminal receiving the multimedia data from the EV-DO system is periodically switched into an IX mode in a predetermined period of time so as to check whether or not voice



signals are received through the IX system, and returns to an EV-DO mode (**See Turner's section [0070], [0088], [0150]**).

With respect to claim 5, the above combinations disclose all the limitations of the claim 5.

With respect to claim 7, Turner discloses a method wherein step (a) includes the sub steps of: i) sequentially initializing a IX mode for making communication with a IX system and an EV-DO mode for making communication with the EV-DO system of the hybrid access terminal such that the hybrid access terminal stays in an idle state (**See Turner's abstract, lines 1-5, section [0002], [0006] particularly lines 8-13 , [0008], [0010] particularly lines 1-8, [0012] particularly lines 1-5, [0015] particularly lines 4-7, [0018], [0041], [0043] lines 5-13, [0045] lines 1-3**); ii) performing a dual monitoring with respect to the IX mode and the EV-DO mode by using the hybrid access terminal in a state that the hybrid access terminal stays in the idle state (**See Turner's section [0070], [0088], [0150]**); and iii) allowing the hybrid access terminal to enter into a traffic state of the EV-DO mode such that a connection and a session are formed between the hybrid access terminal and the EV-DO system, thereby enabling the hybrid access terminal to transmit/receive packet data to/from the EV-DO system (**See Turner's abstract, lines 1-5, section [0002], [0006] particularly lines 8-13 , [0008], [0010] particularly lines 1-8, [0012] particularly lines 1-5, [0015] particularly lines 4-7, [0018], [0041], [0043] lines 5-13, [0045] lines 1-3**).

With respect to claim 8, Turner discloses a method wherein step (c) is carried out after the EV-DO system transmits a response signal with respect to the route update signal to the hybrid access terminal, and the hand-off signal includes a traffic channel assignment signal having a sequence number of a neighbor base station and an acknowledge signal for a reverse traffic channel **(See Turner's [0013] lines 1-5, [0010] lines 1-8, [0014] lines 1-6, [0042] lines 1-4).**

With respect to claim 9, Turner discloses a method wherein, in step (d), the response signal includes a L2Ack signal transmitted from the hybrid access terminal to the EV-DO system in response to the traffic channel assignment signal and a traffic channel completion signal transmitted to the EV-DO system in response to an acknowledge signal for a reverse traffic channel after the L2Ack signal has been transmitted to the EV-DO system **(See Turner's [0013] lines 1-5, [0010] lines 1-8, [0014] lines 1-6, [0042] lines 1-4);**

With respect to claim 10, Turner discloses a method wherein in step (e), if the response signal (L2ACK) is not transmitted to the EV-DO system from the hybrid access terminal in traffic with the EV-DO system even though the EV-DO system has transmitted the traffic channel assignment signal to the hybrid access terminal, the EV-DO system again transmits the traffic assignment signal to the hybrid access terminal, and if the EV-DO system receives the response signal (L2ACK) from the hybrid access terminal in response to the traffic channel assignment signal, the EV-DO system transmits an acknowledge signal for a reverse traffic channel to the hybrid access terminal, and then, re-transmitting the traffic channel assignment signal to the hybrid

access terminal if a traffic channel completion signal is not transmitted to the EV-DO system from the hybrid access terminal, thereby performing the hand-off **(See Turner's section [0108]-[0118])**.

With respect to claim 11, Turner discloses a method wherein in step (a), the hybrid access terminal receiving the multimedia data from the EV-DO system is periodically switched into an IX mode in a predetermined period of time so as to check whether or not voice signals are received through the IX system, and returns to an EV-DO mode **(See Turner's section [0070], [0088], [0150])**.

With respect to claim 12, the above combinations disclose all the limitations of the claim 12.

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SAYED T. ZEWARI whose telephone number is (571)272-6851. The examiner can normally be reached on 8:30-4:30.

9. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester G. Kincaid can be reached on 571-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sayed T Zewari/  
Examiner, Art Unit 2617  
June 17, 2008

/Lester Kincaid/  
Supervisory Patent Examiner, Art Unit 2617